

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants:	Jing Xiang et al.	§ Art Unit:	2139
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Serial No.:	10/791,414	§	
		§ Examiner:	Amare F. Tabor
Filed:	March 3, 2004	§	
		§	
For:	Technique for Maintaining Secure Network Connections	§ Atty. Dkt. No.:	NRT.0124US (16483BAUS01U)
		§	

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Dear Sir:

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

It is respectfully submitted that the obviousness rejection of claim 10 over Bahl and Coile is erroneous.

To make a determination under 35 U.S.C. § 103, several basic factual inquiries must be performed, including determining the scope and content of the prior art, and ascertaining the differences between the prior art and the claims at issue. *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 U.S.P.Q. 459 (1965). Moreover, as held by the U.S. Supreme Court, it is important to identify a reason that would have prompted a person of ordinary skill in the art to combine reference teachings in the manner that the claimed invention does. *KSR International Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741, 82 U.S.P.Q.2d 1385 (2007).

Claim 10 recites a method for maintaining secure network connections, comprising:

- duplicating, at a third network element, a security association associated with a secure network connection between a first network element and a second network element, wherein a lookup of the security association associated with the secure network connection is not dependent on any destination address; and
- in response to detecting failure of the second network element, replacing the second network element with the third network element in the secure network connection with

the first network element, wherein the secure network connection between the first network element and the third network element is based on the duplicated security association.

The Office Action cited Bahl as purportedly disclosing duplicating, at a **third** network element, a security association associated with a secure network connection between a **first** network element and a **second** network element.

In the rejection, the Office Action identified the mobile host 70 or 120 (Fig. 2 or 3 of Bahl) as being the “first network element” of claim 10, and identified the correspondent host 72 or 122 (Fig. 2 or 3 of Bahl) as being the “second network element” of claim 10. 02/22/2010 Office Action at 2. Moreover, the Office Action pointed to the “new mobile address” mentioned in the abstract of Bahl as being the “third network element” of claim 10. The abstract of Bahl refers to a mobile host changing to a new address. The abstract of Bahl states that the system and method described in Bahl provides mobility support to handle address changes of the mobile host to provide transparent session continuity when the mobile host changes to a new address.

The Response to Arguments section of the Office Action argued that “network element” can be “given the broadest reasonable claim interpretation.” *Id.* at 6. According to the Office Action, a “new address” can constitute a “network element” as recited in the claim. It is respectfully submitted that such an interpretation constitutes an **unreasonable** and erroneous interpretation. A network address identifies a network element—however, a network address cannot be a network element, as alleged by the Office Action. In fact, the interpretation of “network element” adopted in the Office Action is inconsistent with usage of the terms within the present application, which is a clear indication that the interpretation adopted by the Office Action is **unreasonable and erroneous**. For example, the specification notes that a secure connection is initiated between two network elements, and that these network elements first negotiate a security association to protect further negotiations. Specification, page 2, lines 5-7. Moreover, the specification also notes that the IP address together with an SPI and a security protocol are used to uniquely identify a security association. *Id.*, 2:10-13. Various network elements are listed on page 9 of the specification, where the network elements can include a security gateway, such as a router, a firewall, or a server, or the network elements can include a mobile client. *Id.*, 9:10-16. Reference is also made to a secure network connection between the mobile client and the security gateway. *Id.*, 9:17-12:19. The foregoing cited passage also refers

to IP addresses associated with the mobile client and security gateway. Moreover, Fig. 4 of the present application also shows a system 400 that depicts the typical components of either a mobile client or a security gateway, where the system 400 includes a processor module 402 that can detect “its IP address change, store the old and new addresses,” *Id.*, 13:18-21. In view of the foregoing, it is respectfully submitted that it is clear that when the claims are properly construed in light of the specification, a “network element” cannot be a network address, as alleged by the Office Action.

In fact, the Office Action did acknowledge that a prior Office Action did indicate that a “new address” cannot be the “third network element” of claim 10, where the third network element can replace the second network element in the secure network connection with the first network element, as recited in claim 10. 02/22/2010 Office Action at 6.

As purportedly disclosing claimed subject matter conceded to be missing from Bahl, the Office Action cited Coile, and specifically to a backup network device 120 shown in Figure 1 of Coile. Coile refers to transferring a network function from a primary network device to a backup network device when it is detected that the primary network device has failed. However, this has nothing to do with the subject matter of claim 10, which refers to replacing the second network element with a third network element in the secured network connection with the first network element, where the secure network connection between the first network element and the third network element is based on the **duplicated** security association. Nowhere in Coile is there any hint provided of replacing one network element with another network element in a secure network connection and then maintaining the secure network connection based on a duplicated security association.

In view of the foregoing, even if Bahl and Coile could be hypothetically combined, the hypothetical combination of references would not have led to the claimed subject matter.

Moreover, no reason existed that would have prompted a person of ordinary skill in the art to combine the teachings of Bahl and Coile.

Bahl refers to a change of address of a mobile host as the mobile host moves around. Bahl describes how a secure connection can be maintained between the mobile host and a correspondent host even though the address of the mobile host has changed. This teaching of Bahl has nothing to do with the subject matter of claim 10, which relates to detecting failure of a second network element (to which the first network element has established a secure network

connection that is associated with a security association) and replacing the second network element that has failed with a third network element in the secure network connection with the first network element. Maintaining a secure connection in response to a change of address of a mobile host, as taught by Bahl, has nothing to do with detecting failure of the second network element and replacing the second network element with a third network element in the secure network connection with the first network element, as recited in claim 10. Moreover, Coile provides absolutely no hint whatsoever that its failover mechanism would maintain a secure network connection that is based on a **duplicated** security association. In view of the foregoing, it is clear that a person of ordinary skill in the art would have found no reason to combine the teachings of Bahl and Coile to achieve the claimed invention.

Therefore, it is respectfully submitted that the obviousness rejection of claim 10 is in error. Independent claim 22 is similarly allowable over Bahl and Coile.

Independent claim 12 recites a method for maintaining secure network connections, comprising:

- configuring a plurality of security gateways such that a lookup of security associations is not dependent on any destination address; and
- sharing a security association among the plurality of security gateways.

Claim 12 recites sharing a security association among a plurality of security gateways. The Office Action cited security associations 84 and 86 and the IPsec/ISAKMP security associations of Bahl as being shared among a plurality of security gateways (which the Office Action equated to correspondent hosts (or servers 112a and 112b disclosed in Coile)). 02/22/2010 Office Action at 3. The security association 84 of Bahl resides in the correspondent host 72, while the security association 86 resides in the mobile host 70. Similarly, the ISAKMP security association 142 in Fig. 3 of Bahl resides in the mobile host 120, while the ISAKMP security association 146 resides in the correspondent host 122. In each of Figs. 2 and 3 of Bahl, a secure connection associated with a particular security association is maintained between a mobile host and a correspondent host. There is absolutely nothing in Bahl that would even remotely hint at sharing a security association at multiple security gateways. In other words, different security associations in a correspondent host in Bahl would correspond to different secure connections with different mobile hosts. Therefore, there would be no sharing of a security association among a plurality of security gateways.

Coile also makes absolutely no mention of sharing a security association among a plurality of security gateways.

Therefore, even if Bahl and Coile could be hypothetically combined, the hypothetical combination of the references would not have led to the claimed subject matter. Moreover, a person of ordinary skill in the art would not have been prompted to combine the teachings of Bahl and Coil to achieve the subject matter of claim 12, since the concept of sharing a security association among a plurality of security gateways does not exist in Bahl or Coile.

The obviousness rejection of claim 12 is therefore also defective.

Dependent claims are allowable for at least the same reasons as corresponding independent claims.

In view of the foregoing, it is respectfully requested that the final rejections of the claims be withdrawn. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 14-1315 (16483BAUS01U).

Respectfully submitted,

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/Dan C. Hu/

Dan C. Hu
Registration No. 40,025
TROP, PRUNER & HU, P.C.
1616 South Voss Road, Suite 750
Houston, TX 77057-2631
Telephone: (713) 468-8880
Facsimile: (713) 468-8883